ABSTRACT OF THE DISCLOSURE

A perpendicular magnetic recording medium has high recording density and excellent read-write characteristics. The recording medium has a magnetic layer of a multilayered lamination structure composed of laminated cobalt layers mainly containing cobalt and noble metal layers of platinum or palladium. At least one of the cobalt layers and the noble metal layers contains at least one element selected from the group consisting of Ru, Ta, Nb, Mo, Mn, Cr, Si, and Ni, or an oxide, in a concentration ranging from 1 to 15 mol%. The magnetic layer is formed on an underlayer of ruthenium or the like for reducing magnetic interaction between the magnetic particles in the magnetic layer. The surface of the underlayer is treated for oxygen adsorption before depositing the magnetic layer to suppress magnetic interaction between the magnetic particles in the magnetic layer.